REMARKS

In accordance with the foregoing, claims 1, 2, 6-12, 16, and 27-29 have been amended, claims 17-21 have been withdrawn without prejudice or disclaimer, and claims 1-16 and 22-29 are pending and under consideration. No new matter is presented in this Amendment.

REJECTIONS UNDER 35 U.S.C. §112:

Claims 9 and 16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner rejected claim 9 for having insufficient antecedent basis for the recited limitation "each recording layer," and rejected claim 16 for having insufficient antecedent basis for the recited limitations "the tracking polarity information" and "the information that are repeatedly recorded." Accordingly, claims 9 and 16 have been amended to provide proper antecedent basis for these recited limitations.

REJECTIONS UNDER 35 U.S.C. §102:

Claim 1 is rejected under 35 U.S.C. §102(e) as being anticipated by Selinfreund et al. ("Selinfreund") (U.S. Patent Pub. 2003/0219124). Specifically, the Examiner argues that "Selinfreund clearly discloses an optical disc, comprising: a clamping area; a lead-in area; a data area; and a burst cutting area (BCA) between the clamping area and the lead-in area and in which information regarding the optical disc is recorded, wherein the information is read before performing tracking in the data area (paragraph [0064] and Figure 1B)". Accordingly, claim 1 has been amended to recite that the information regarding the optical disc comprises tracking polarity information. The Examiner admits on page 4, item 8 of the Office Action that Selinfreund does not disclose that the information regarding the optical disc is tracking polarity information. It is therefore respectfully submitted that the rejection of claim 1 should be withdrawn for at least this reason.

It is also respectfully submitted that the Examiner has not shown that Selinfreund anticipates each and every element of claim 1. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP 2131. Here, the Examiner has not shown that Selinfreund expressly

or inherently discloses a BCA "between the clamping area and the lead-in area" as recited by claim 1 of the instant application. Selinfreund does not disclose a BCA located between a clamping area and a lead-in area anywhere in paragraph [0064]. Furthermore, FIG. 1B shows a Lead-In Area which includes a BCA within the Lead-In Area. Specifically, the label for the Lead-In Area shown in FIG. 1B reads: "Lead-In Area (starts at 45.2 mm max) (with BCA starts at 44.5 mm max)", and the label for the BCA area reads: "Burst Cutting Area (in Lead-In Area) (starts at 44.6 +0/-0.8 mm) (ends at 47 +/-0.1 mm) (emphasis added)". These labels clearly disclose that the BCA disclosed by Selinfreund is located in the Lead-In Area. A BCA which is located in a lead-in area is not the same as a BCA which is located between the clamping area and the lead-in area, as recited by claim 1. Thus, it is respectfully submitted that Selinfreund fails to disclose at least the element of a BCA "between the clamping area and the lead-in area (emphasis added)" as recited by claim 1 of the instant application.

Additionally, Selinfreund fails to disclose a BCA "in which information regarding the optical disc is recorded", as recited by claim 1. The only description of the BCA in Selinfreund is in paragraph [0064], which states: "Representative disc of FIG. 1B includes lead-in area 1, clamping area 3, guard are 5, burst cutting area 7, data area 9 and lead-out area 11, as would be understood by one of ordinary skill in the art." Paragraph [0064] further states that "the Lead-in area 1 consists of several zones used in preparation for manufacturing, used by the drive for automatic adjustments prior to reading the disc, and used to describe the physical configuration, manufacturing information, and programmatic information supplied by the content provider." Selinfreund therefore discloses that information, including manufacturing and programmatic information, is recorded in the Lead-in area 1. However, Selinfreund does not mention that any of this information is recorded in the BCA. Thus, Selinfreund also fails to disclose this element of claim 1.

Furthermore, Selinfreund does not disclose a BCA "in which information regarding the optical disc is recorded, wherein the information is read before performing tracking in the data area", as recited by claim 1. The only tracking information disclosed in paragraph [0064] of Selinfreund is disclosed relative to the lead-out area 11, which states: "lead-out area 11 is comprised of fixed data not typically available to the end user but useful to maintain tracking in the event of overshoot during a very rapid seek." This description does not disclose that information recorded in a BCA is read before performing tracking in the data area, as recited by claim 1. Thus, Selinfreund also fails to disclose this element of claim 1. For these reasons, it is

respectfully submitted that the Examiner has not shown that Selinfreund anticipates each and every element of claim 1, and the rejection should be withdrawn.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 2 and 4

Claims 2 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Selinfreund and further in view of Uhde et al. ("Uhde") (U.S. Patent Pub. 2002/0003757). It is respectfully submitted that claims 2 and 4 are patentable for at least the same reason as claim 1 is patentable. Additionally, claims 2 and 4 are patentable for at least the following additional reasons.

Selinfreund And Uhde Are Not Analogous Art

It is respectfully submitted that Selinfreund and Uhde are not analogous art. In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP 2141.01(a). Here, Selinfreund discloses a copy-protected optical medium with optical state change security materials. Paragraph 29. Selinfreund focuses on the chemical used to manufacture this copy-protected optical medium, as shown in FIGS. 2, 3 and 4 and described throughout the specification. Uhde, on the other hand, discloses a method of using the BCA in an optical disc to reduce a waiting or adjustment time after the insertion of the optical disc into an optical read/write apparatus. Paragraph 7.

The fact that Selinfreund and Uhde both somehow relate to optical discs does not make Selinfreund and Uhde analogous art. In In Re Clay, the Federal Circuit held that two prior art references, Sydansk and Clay, were not analogous art "merely because both relate to the petroleum industry," since Sydansk related to the "extraction of crude petroleum", while Clay related to the "storage of refined liquid hydrocarbons." 23 USPQ2d 1058, 1060 (1992). Similarly, in this case, Selinfreund relates to applying optical state change security materials to an optical disc for copy protection purposes, whole Uhde relates to using the BCA of an optical disc to speed up recording and/or reproducing operations. Selinfreund and Uhde, like the Sydansk and Clay references in In Re Clay, fall into completely distinct fields of endeavor, and

the mere fact that both Selinfreund and Uhde involve optical discs does not make Selinfreund and Uhde analogous art.

Additionally, Selinfreund and Uhde are involved with solving completely different problems. Selinfreund is directed towards fulfilling the "need...for a copy-protected optical medium, which does not depend on encryption codes, or special hardware to cause re-sampling of a disc to permit access to content, that does not require exacting deposition of phase change materials onto the disc, and that reduces unintended phase changes due to exposure to ambient light sources." Paragraph 15. Selinfreund thus combines optical state change materials with optical discs to fulfill this need. In contrast, Uhde is directed towards shortening "a waiting or adjustment time after the insertion of the optical recording medium" into an optical read/write apparatus. Paragraph 7. Udhe thus discloses a method of using the BCA of an optical disc to shorten this time waiting or adjustment. The problem of protecting data on an optical medium has nothing to do with the problem of shortening a waiting or adjustment time after the insertion of an optical disc into an optical read/write apparatus. Thus, it is respectfully submitted that Selinfreund and Uhde are not analogous art.

One Skilled In The Art Would Not Have Been Motivated To Combine Selinfreund And Uhde

Additionally, one of ordinary skill in the art at the time the invention was made would not have been motivated to combine the teachings of Selinfreund and Uhde to arrive at the invention claimed in claims 2 and 4. There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. MPEP 2143.01. Here, the Examiner admits that Selinfreund does not teach BCA information which includes "at least one of tracking polarity information and reflectivity information", as recited by claim 2. The Examiner then argues that Udhe teaches this missing element by disclosing "tracking regulation" information including "track gain" and "track offset" (paragraph [0022]), and that one skilled in the art at the time the invention was made would have been motivated to combine the optical disc of Selinfreund with the track gain and track offset information of Udhe in order to "shorten the waiting or adjustment time after the insertion of the optical recording medium into the apparatus (Uhde paragraph [0007])" and arrive at the invention claimed in claim 2.

Paragraph [0071] of Selinfreund states the following:

> "As most conventional optical readers use laser-incident light to read the optical medium, it is preferred that the optically-changeable security material be responsive to one or more of the conventional laser wavelengths used in such conventional optical readers (emphasis added)."

Selinfreund prefers using "conventional laser wavelengths used in such conventional optical readers," as explained above, in order to ensure that the copy-protected media using the optical state change security materials is "readable by the large number of existing optical medium readers or players without requiring modifications to those devices." Paragraph 15. In contrast, paragraph [0020] of Uhde states the following:

> "All that is necessary is for the objective lens of the optical read unit 2 to be coarsely focused by corresponding focus regulation, while track regulation is not necessary since the BCA data area is very large in relation to the scanning beam of the optical read unit and lies in a specific diameter region of the DVD-ROM disc 1. Consequently, the scanning beam of the optical read unit 2 merely has to be moved to this specific diameter region of the DVD-ROM disc 1, preferably into the centre of the said region (emphasis added)."

Uhde is teaching using an unconventional (i.e., "coarse") laser wavelength in an unconventional way by moving the scanning beam of the optical read unit 2 to the BCA data area. Conventional optical readers are not equipped to focus "coarse" laser wavelengths onto BCA data areas of optical discs. One skilled in the art would not have been motivated to combine Uhde, which uses an unconventional wavelength, with Selinfreund, which teaches using a conventional wavelength. Thus, it is respectfully submitted that claims 2 and 4 are patentable for at least this reason.

Additionally, regarding Claim 4, the Examiner takes official notice that "it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to locate the tracking polarity information in any location of the BCA including in the leading...because locating the tracking polarity information in any location in the BCA of the optical disc would produce identical performance in terms of storing and reading back data (emphasis added)." It is not appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. MPEP 2144.03(A). Here, the Examiner's assertion is not capable of instant and unquestionable demonstration as being well-known. On the contrary, changing the location of tracking polarity information in the BCA could possibly

alter the performance of storing and reading back data, for instance, by speeding up or slowing down storing and/or reading operations since the objective lens may have to travel farther to some locations of the BCA compared to other locations. Thus, it is respectfully submitted that the rejection of claim 4 should be withdrawn for at least this reason as well.

Claim 3

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Selinfreund and further in view of Uhde as applied to claim 2 above, and further in view of Nishiuchi et al. ("Nishiuchi") (U.S. Patent 6,894,962). It is respectfully submitted that claim 3 is patentable for at least the same reasons as claims 1 and 2 are patentable. Additionally, it is respectfully submitted that claim 3 is also patentable for at least the following reasons.

One Skilled In The Art Would Not Have Been Motivated To Combine Selinfreund, Uhde, and Nishiuchi

One of ordinary skill in the art at the time the invention was made would not have been motivated to combine the teachings of Selinfreund, Uhde, and Nishiuchi to arrive at the invention claimed in claim 3. The Examiner admits that neither Selinfreund nor Uhde teach that "the tracking polarity information and the reflectivity information are recorded with a pattern of crystalline or non-crystalline marks," as recited in claim 3. The Examiner then argues that Nishiuchi teaches this missing element in Column 11, lines 48-53, and that one skilled in the art at the time the invention was made would have been motivated to combine the teachings to arrive at the invention claimed in claim 3 in order to allow information to be recorded "without damaging the information layer" (Nishiuchi column 11 lines 54 and 55).

Paragraph [0020] of Uhde states:

> "The use of the BCA data area for identifying the DVD-ROM disc 1 is advantageous since this comprises relatively coarse structures and can be read very easily by the read apparatus (emphasis added)."

This "coarse" BCA data area, as taught by Uhde, can be read very easily by the read apparatus. In contrast, Col. 11, lines 34-35 of Nishiuchi state: "when information is recorded on the BCA, the information layer is damaged." To fix this problem, Nishiuchi teaches a crystalline state to allow the "sector dislocation information to be recorded without damaging the information layer." Col. 11, lines 54-55. One skilled in the art would not have been motivated to

combine the coarse, easily readable BCA data area taught by Uhde with the crystalline state of Nishiuchi because an information layer which is damaged each time information is recorded thereon is not a coarse, easily readable BCA data area. Thus, it is respectfully submitted that the rejection of claim 3 should be withdrawn for this reason as well.

Claim 5

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Selinfreund and further in view of Uhde as applied to claim 4 above, and further in view of Kobayashi et al. ("Kobayashi") (U.S. Patent 6,819,643). It is respectfully submitted that claim 5 is patentable for at least the same reasons as claims 1, 2 and 4 are patentable. Additionally, it is respectfully submitted that claim 5 is also patentable for at least the following reasons.

One Skilled In The Art Would Not Have Been Motivated To Combine Selinfreund, Uhde, and Kobayashi

One of ordinary skill in the art at the time the invention was made would not have been motivated to combine the teachings of Selinfreund, Uhde, and Kobayashi to arrive at the invention claimed in claim 5. The Examiner admits that neither Selinfreund nor Uhde teach that "the tracking polarity information is repeatedly recorded," as recited in claim 5. The Examiner then argues that Kobayashi teaches this missing element in Column 4, lines 10-17, and that one skilled in the art at the time the invention was made would have been motivated to enhance the optical disc that contains the tracking polarity information of Selinfreund and Uhde by repeatedly recording the information as taught by Kobayashi to "maintain reliable tracking polarity information (emphasis added)."

As the Examiner indicates, col. 4, lines 14-17 of Kobayashi discloses "copyright protection information SA" which is "repeatedly recorded in the form of a pit sequence." Col. 12, lines 20-24 explain why the copyright protection information is repeatedly recorded:

> "Thus, irrespective of the track being scanned, each byte of the copyright protection information SA is recorded while being distributed over the full length of each track of the minidisk 2. Thus, in the minidisk 2, even if a playback is performed without any tracking control, the playback laser beam being scanned diagonally crossing a plurality of tracks, continuous playback signal is played back sequentially in time as playback signals of each of the bytes of the copyright protection information SA."

Kobayashi thus teaches repeatedly recording copyright protection information SA to

ensure continuous playback even if playback is performed without any tracking control. One skilled in the art would not have been motivated to combine Kobayashi, which teaches repeatedly recording information to prepare for an absence of tracking control, with the teachings of Selinfreund and Uhde to "maintain reliable tracking polarity information." Thus, it is respectfully submitted that claim 5 is patentable for at least this reason as well.

Claim 9

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Selinfreund as applied to claim 1 above, and further in view of Otomo et al. ("Otomo") (U.S. Patent Pub. 2001/0008578). It is respectfully submitted that claim 9 is patentable for at least the same reasons as claim 1 is patentable. Additionally, it is respectfully submitted that claim 9 is also patentable for at least the following reason.

One Skilled In The Art Would Not Have Been Motivated To Combine Selinfreund And Otomo

One of ordinary skill in the art at the time the invention was made would not have been motivated to combine the teachings of Selinfreund and Otomo to arrive at the invention claimed in claim 9. The Examiner admits that Selinfreund does not teach an optical disc "wherein the clamping area, the lead-in area, and the data area are formed in each recording layer of the optical disc," as recited in claim 9. The Examiner then argues that Otomo teaches this missing element in paragraph [0081] and Figure 1, and that one skilled in the art at the time the invention was made would have been motivated to combine the teachings in order to "quickly access the information contained in the lead-in area while recording on a particular layer."

It is unclear where or how the Examiner arrived at this motivation to combine. Regarding the nature of the problem to be solved, neither Selinfreund nor Otomo are concerned with quickly accessing information contained in the lead-in area while recording on a particular layer. Selinfreund is directed towards fulfilling the "need...for a copy-protected optical medium, which does not depend on encryption codes, or special hardware to cause re-sampling of a disc to permit access to content, that does not require exacting deposition of phase change materials onto the disc, and that reduces unintended phase changes due to exposure to ambient light sources." Paragraph 15. Otomo is concerned with providing "a digital information medium which can access not only DVD audio information but also part (e.g., some video data) of DVD video information." Paragraph [0014]. Neither of these purposes have anything to do with

quickly accessing information contained in the lead-in area while recording on a particular layer.

Regarding the teachings of the prior art, the Examiner has not pointed to any part of either reference teaching this alleged motivation to combine. Regarding the knowledge of persons of ordinary skill in the art, the Examiner has not provided any evidence that the knowledge of persons of ordinary skill in the art suggests the desirability of combining Selinfreund with Otomo to arrive at the invention claimed in claim 9. Thus, it is respectfully submitted that the Examiner has not disclosed a sufficient motivation to combine, and that claim 9 is patentable for at least this reason as well.

Claims 11, 12, 22, 25, 27, and 28

Claims 11, 12, 22, 25, 27, and 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Otomo and further in view of Uhde.

Claim 11

Regarding claim 11, it is respectfully submitted that claim 11 is patentable for at least the following reason.

One Skilled In The Art Would Not Have Been Motivated To Combine Otomo And Uhde

One skilled in the art at the time the invention was made would not have been motivated to combine the teachings of Otomo and Uhde to arrive at the invention claimed in claim 11. It is noted that claim 11 has been amended to recite that the information regarding the optical disc comprises tracking polarity information. The Examiner argues that one skilled in the art at the time the invention was made would have been motivated to combine the teachings of Otomo and Uhde to arrive at the invention claimed in claim 11 in order to "shorten the waiting or adjustment time after the insertion of the optical recording medium into the apparatus" (Uhde paragraph [0007]).

Otomo is directed towards "a digital information medium which can access not only DVD audio information but also part (e.g., some video data) of DVD video information." Paragraph [0014]. At paragraph [0326], Otomo describes a method of playing back video from its digital information medium:

> "When disc 10 with the data structure shown in FIG. 14 is to be played back by a normal DVD video player, this video player loads VMG in the VTS directory under the root

directory shown in FIG. 12, and determines a title to be played back on the basis of the loaded information."

Paragraph [0328] of Otomo describes a similar playback process for audio data. Thus, paragraphs [0326] and [0328] of Otomo describe specific ways of respectively playing back video data and audio data stored on an optical information storage medium. One skilled in the art would not have been motivated to combine Otomo with Uhde to arrive at the invention claimed in claim 11 because Otomo specifically describes how to load an optical disc in a certain way to "determine a title to be played back," while Uhde is directed towards a completely different method of playback which includes using a BCA area to individually identify a disc. The disc disclosed by Otomo does not require using a BCA for individual identification, since the data structure used with the disc in Otomo enables a normal DVD player to load information stored on the disc automatically. Thus, it is respectfully submitted that claim 11 is patentable for at least this reason.

Claims 12, 22, 25, 27 and 28

It is respectfully submitted that claims 12, 22, 25, 27 and 28 are patentable for at least the same reason that claim 11 is patentable.

Claims 13, 14, 23, and 24

Claims 13, 14, 23, and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Otomo and Uhde as applied to claims 11, 12, and 22 above, and further in view of Nishiuchi. In rejecting claims 13, 14, 23 and 24, the Examiner relied on the same motivation to combine used in rejecting claim 3, specifically, that one skilled in the art would have been motivated to combine the teachings in order to allow information to be recorded "without damaging the information layer" (Nishiuchi Column 11 lines 54 and 55). Accordingly, it is respectfully submitted that claims 13, 14, 23 and 24 are patentable for at least the same reason as claim 3 is patentable.

Claim 15

Claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Otomo, Uhde, and Nishiuchi as applied to claim 14 above, and further in view of Kobayashi et al (U.S. Patent

6,819,643). In rejecting claim 15, the Examiner relied on the same motivation to combine used in rejecting claim 5, specifically, that one skilled in the art at the time the invention was made would have been motivated to combine the teachings in order to maintain reliable tracking polarity information. Accordingly, it is respectfully submitted that claim 15 is patentable for at least the same reasons as claim 5 is patentable.

Claim 26

Claim 26 is rejected under 35 U.S.C. §103(a) as being unpatentable over Otomo and Uhde as applied to claims 22 above, and further in view of Kusumoto et al (U.S. Patent 6,295,262). It is respectfully submitted that claim 26 is patentable for at least the same reasons as claim 22 is patentable. Additionally, claim 26 is patentable for at least the following additional reason.

One Skilled In The Art Would Not Have Been Motivated To Combine Otomo, Uhde and Kusumoto

One of ordinary skill in the art at the time the invention was made would not have been motivated to combine the teachings of Otomo, Uhde, and Kusumoto to arrive at the invention claimed in claim 26. The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the serial number and manufacturing date, as taught by Kusumoto into the BCA area of the optical disc taught by Otomo and Uhde because "the added information can be read easily" and it is possible to implement the information "securely and efficiently" (see Kusumoto column 1 lines 52-57).

Column 1, lines 52-57 of Kusumoto are located in the "Background of the Invention" section of Kusumoto. These cited lines are describing a technique disclosed in the prior art Japanese Patent Application No. 8-8910. Immediately following these excerpts quoted by the Examiner, Col. 1, lines 60-64 of Kusumoto describe the method which allows "added information" to be "read easily" and information to be implemented "securely and efficiently":

> "However, with the above-described method of additionally writing bar codes, there may occur optical disks from which bar codes can hardly be read or optical disks for which erroneous information is read, that is, defective products."

One skilled in the art at the time the invention was made would not have been motivated to incorporate the serial number and the manufacturing date of Kusumoto based on a method

which Kusumoto itself describes as a method that produces "optical disks from which bar codes can hardly be read or optical disks for which erroneous information is read, that is, defective products." Thus, it is respectfully submitted that the rejection of claim 26 should be withdrawn for at least this reason.

ALLOWABLE SUBJECT MATTER:

Claims 6-8, 10, 16, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

Date: 1/24/07

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